INTER OFFICE MEMO Olin

C. L. Knowles AT

P. B. Duff AT

DATE June 1, 1983

COPY TO B. E. Hill
A. M. Carnam

LEAD ANALYSIS
PINE SWAMP

Connecticut DEP officials have expressed concern relative to elevated lead concentrations in samples obtained by department personnel on December 11 and 15, 1981 from groundwater monitoring wells located at Pine Swamp. Results of this analysis were shared with Olin in early August 1982, and this information was inconsistent with results obtained by ERT during their Phase II study program. At my request, Ted Groom (Olin-New Haven) recently resampled the three wells involved and listed below is a synopsis of all data described above.

LOCATION INFORMATION		12/11 & 12/15 DEP SAMPLE ppb		OLIN/ERT DECEMBER 1981 PHASE II SAMPLE ppb		MAY '83 OLIN RESAMPLE ppb	
WELL NUMBER	WELL DEPTH	VALUE	DETECTION LIMIT	VALUE	DETECTION LIMIT	VALUE	DETECTION LIMIT
ERT 9	5'	300	?	ND	100	7.5	7.5
ERT 17	7.5'	940	?	180	100	132	7.5
ERT 20	15'	280	?	ND	100	24	7.5

ERT's initial sample was analyzed on a flame-type atomic adsorption unit that has a detection limit of 100 ppb. Drinking water quality analysis should be conducted on a flameless graphite furnance, therefore, Ted Groom resampled each well and supervised the reanalysis on an appropriate unit that has a 7.5 ppb detection limit.

NOTE: Drinking water standard for lead is 50 ppb.

Olin's reanalysis shows that water withdrawn from ERT 9 and 20 is well within the drinking water limit for lead, while ERT 17 shows a moderate elevation.

These latest results illustrated that lead contained in battery waste buried at Pine Swamp is quite immobile and doesn't transfer readily to the adjacent groundwater.

P. B. Duff

PBD/sp

INTER OFFICE MEMO Olin

Pine Swamp

TO P. B. Duff AT Stamford DATE June 3, 1983

FROM T. Groom AT New Haven
J. D. Kaufman AT New Haven COPY TO W. W. Harple
R. N. Scott
File #22

SUBJECT **PINE SWAMP SAMPLES FOR LEAD**

On May 19, 1983, 3 monitoring wells at Pine Swamp were sampled and analyzed for lead. Results are listed below. The limit of detection of the method used was <7.5 ppb.

ERT Well #9	7.5 ppb; 7.5 ppb
ERT Well #17	135 ppb; 130 ppb
ERT Well #20	35 ppb; 12 ppb

Experimental:

The wells were sampled with an ISCO peristaltic pump using teflon tubing rinsed with distilled, deionized water between samples. All wells were 2" PVC pipe.

Site	Well Volume	Volume Pumped Before Sampling
Well #9	6 1/4 liters	21 liters
Well #17	7.5 liters	42 liters
Well #20	9.3 liters	51 liters

Each well was pumped for ∿5 well volumes before taking a 1 gallon sample. Well #9 went dry after ∿20 liters (3.4 well volumes) and recovered only very slowly. A sample was then taken after ∿1/2 hr. wait. There appeared to be an obstruction at ∿6 1/2 feet in this well. After many attempts the sampling tube would go no lower.

All samples were pressure filtered through a 0.8 μm millipore filter before analysis for lead.

T. Groom

J. D. Kaufman

mdw

Ref.: B50815-B
B50815-A
B50815-C

RECEIVED
JUN 7 1983
P. B. DUFF

INTER OFFICE MEMO Olin

TO C. L. Knowles AT Stamford DATE August 17, 1982

FROM P. B. Duff AT Stamford COPY TO T. Groom

SUBJECT PINE SWAMP

Attached is a copy of the states analysis conducted on groundwater withdrawn from the following wells:

ERT 9
ERT 17
ERT 20

Brian Curtis noted that samples #9 and #17 contained a small amount of brown floc.

ERT reported non detected for the lead while the states results are as follows:

Well No.	Lead ppb
ERT 9	300
ERT 17	940
ERT 20	280

P. B. Duff

PBD/mao

Attachment

WHY FILE THIS COPY? IF YOU MUST RETAIN IT, SPECIFY A DEFINITE RETENTION PERIOD: ONE YEAR _____ OTHER _____

STATE OF CONNECTICUT

PHONE 566-5626

DEPARTMENT OF HEALTH SERVICES DEC 16 2 08 PM '81

LABORATORY DIVISION

SAMPLE

P.O. BOX 1689, HARTFORD, CONN. 06101 10 CLINTON STREET

INVOICE

SAMPLES OF SEWAGE OR TRADE WASTE

To be filled in by person collecting samples

From Olin Powder Farm in town of HAMDEN 62

Sample of sewage ( ), trade waste ( ), sludge ( ), or Groundwater

Name of treatment plant

Owned by

Plant processes or treatment

Collected by Brian Curtis - DEP/Water Compliance New Haven Water Company - Tom Chaplik On #9 → 12/11/81 DEP #17 #20 → 12/15/81 NHWCo

Report to Brian Curtis, Sr. San. Engineer (Name) (Title) DEP / Water Compliance Shipped on

Laboratory Number	Collector's Number	Sample of	Collected From	Composite Yes or No	Composite Min. Apart	Time of Collection
28135	ERT 9	Groundwater	Monitoring well	No		
28136	ERT 17	"	"			1:55 PM
28137	ERT 20	"	"	"		—
						—

No. and Kind of Bottles

OL-33

: #9 and #17 contained small amount of brown floc

John J. Redys
Director

Metals

Manganese — Chromium —
Zinc Lead —
Cadmium — Mercury —
Iron —

ATTACHMENT G